POKORNY, Miloslav; WEISS, Jaroslav; DVORAK, Jaroslav; DLABAC, Mikulas; PESL,
Vaclav; PELISEK, Josef

Fourteenth Congress of the Czechoslovak Society of Mineralogy
and Geology in Brno, 1963. Cas min geol 9 no.2:251-256 '64.

L 41175-66   EWP(c)/EWP(k)/T/EWP(v)/EWP(1)   IJP(c)

ACC NR: AP6030186   SOURCE CODE: CZ/0088/65/000/005/0410/0420

AUTHOR: Weiss, Jaroslav (Engineer; Candidate of sciences)

ORG: Institute of Information Theory and Automation, CSAV, Prague (Ustav teorie informace a automatizace CSAV)

TITLE: Compensation of the disturbance by means of the model in a discrete control system /This paper was presented at the International Conference on Multiparameters and Discrete Control Systems held in Prague from 9 to 14 June 1965./

SOURCE: Kybernetika, no. 5, 1965, 410-420

TOPIC TAGS: transfer function, control system stability

ABSTRACT: A feedback control system is described which compensates by means of a plant model the disturbances that cannot be measured. If some command variable is introduced at the input of the control system, then the output signal of the plant is equal to the output signal of the plant model. If the control signal is subject to some disturbance signal, then the plant output and the model output are not equal, and the difference is used to compensate the influence of the disturbing signal. The system transfer functions in modified z-transform are derived, and it was found that the control system can have the required characteristics when compensating the disturbance as well as when following the command signal. The transfer functions are analyzed from the viewpoint of sensitivity, and stability conditions are set for small variations. The functioning of the control system was tested by analog computation. Orig. art. has: 3 figures, 39 formulas, and 1 table. /Based on author's Eng. abst./

/JPRS: 34,162/

SUB CODE: 13 /hs SUBM DATE: 24Jan65 / OTH REF: 002

Card 1/1

L 34698-66   EWT(d)   IJF(c)

ACC NR: AP6025880   SOURCE CODE: CZ/0080/66/000/002/0040/0043

AUTHOR: Weiss, Jaroslav (Engineer; Candidate of sciences)   25
                                                                             B
ORG: Institute of Information Theory and Automation, CSAV (Ustav teorie informace a
automatizace CSAV)
                                                                  16
TITLE: Contribution to the numerical solution of algebraic equations of higher
degrees

SOURCE: Automatizace, no. 2, 1966, 40-43

TOPIC TAGS: algebraic equation, numeric solution, iteration, polynomial

ABSTRACT: The article describes a method of determining the convergence of iteration
in division of a polynomial by a quadratic trinomial if the approximate position of
the complexly associated points under consideration are known (or the coefficients
of the trinomial corresponding approximately to that complex pair). Orig. art. has:
31 formulas. [JPRS: 35,386]

SUB CODE: 12 / SUBM DATE: none / OTH REF: 003

Card 1/1   UDC: 518.6

WEISS, Jan

The method of determining potentials from the singularities
of the Jost functions. Mat. fyz cas SAV 13   no.1:58-63 '63.

1. Katedra fyziky, Strojnicka fakulta, Slovenska vysoka skola
technicka, Bratislava, Gottwaldovo namesti 2.

L 09880-67   EWP(c)/EWP(f)   WW/JWD

ACC NR: AP6032605   SOURCE CODE: PO/0032/66/013/003/0415/0430

75

AUTHOR: Weiss, Jerzy (Warsaw)

ORG: none

TITLE: Use of digital computers to determine time dependency of pressure in solid fuel rocket engines

SOURCE: Archiwum budowy maszyn, v. 13, no. 3, 1966, 415-430

TOPIC TAGS: rocket engine, ballistics, digital computer, solid fuel rocket engine, rocket fuel system, rocket engine pressure/Ural-2 digital computer, Elliott-803 digital computer

ABSTRACT: The method for determining combustion pressures in solid fuel rocket engines was based on a differential equation of pressures in the combustion chamber with rocket ballistic properties and design parameters. Urals-2 and Elliott-803 digital computers were used to calculate the equation for application over a wide range of fuel combustion values. The method substantially facilitates ballistic design for solid fuel rocket engines and applied to a number of solid fuel rocket engines operated in Poland. Orig. art. has: 1 figure, 1 table, and 39 formulas. [Based on author's abstract]

Card 1/14 SUB CODE: 09, 19, 21/SUBM DATE 00May65/ORIG REF: 004/OTH REF: 001

ACC NR: AP6029402   SOURCE CODE: PO/0102/66/000/005/0001/0005

AUTHOR: Szczecinski, Stefan (Lieutenant colonel, Doctor, Engineer); Weiss, Jerzy (Colonel, Doctor, Engineer)

ORG: none

TITLE: Modern propellants for rocket engines

SOURCE: Technika lotnicza i astronautyczna, no. 5, 1966, 1-5

TOPIC TAGS: rocket engine oxidizer, rocket engine propellant, solid propellant, liquid propellant

ABSTRACT: The paper reviews the desirable characteristics of solid and liquid rocket propellants. Independently of the energy requirements, the search for new propellants is directed toward fulfilling certain definite operational requirements such as chemical stability, and in solid propellants mechanical stability, under various climatic and atmospheric conditions, starting readiness being preserved. In this respect, the the maximum capabilities have almost been reached in the field of liquid propellants, and the future undoubtedly belongs to solid propellants. Various additives designed to decrease the combustion rate are already being used, as in the American engine UTC P-1 of the "Titan" 3C rocket. Powdered metals (such as aluminum in the engine of the "Polaris" rocket) are added to increase the specific thrust. New liquid propellants are generally based on liquid oxygen (despite its physical instability at normal

Card 1/2

ACC NR: AP6029402

pressures and temperatures) or liquid oxygen with admixtures of the oxidizers ozone or even fluorine. Various hydrocarbons (e. g., aviation kerosene) or liquid hydrogen are used as fuels. The use of fluorine permits a specific thrust of more than 400 kg/kg/sec, i. e., a thrust 1.5 times greater than that of engines using other oxidizers. Orig. art. has: 2 figures and 3 formulas.

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 008 / SOV REF: 006

Card 2/2

STEFFEN, Jan; ADAM, Wlodzimierz; ARASIMOWICZ, Czeslaw; KNAPOWSKI, Jan; WEISS, Krystyna; CZARNECKI, Ryszard

Tubular transportation of uric acid in dog nephrons. Acta physiol. Pol. 13 no.1:1-10 '62.

1. Z Zakladu Patologii Ogolnej i Doswiadczalnej A. M. w Poznaniu Kierownik: prof. dr A. Horst Z II Kliniki Chorob Wewnetrznych A.M. w Poznaniu Kierownik: prof. dr J. Roguski.

(KIDNEYS physiol)   (URIC ACID metab)

KNAPOWSKI, Jan; ADAM, Wlodzimierz; ARASIMOWICZ, Czeslaw;
WEISS, Krystyna

Intestinal excretion of uric acid in dogs. Acta med. pol. 4
no.2:201-207 '63.

1. Department of General and Experimental Pathology, Medical
Academy, Poznan Director: Prof. Dr A. Horst IInd Clinic of
Internal Diseases, Medical Academy, Poznan Director: Prof.
Dr J. Roguski.
      (INTESTINES)   (URIC ACID)

Weiss, L.

GLIGORE, V.; CHIRTOC, Gh.; WEISS, L.

Clinical and therapeutic aspects of intra- and post-infection acute
thyroiditis. Med. int., Bucur. 9 no.12:1814-1821 Dec 57.

1. Clinica a II-a medicala, Cluj (prof. I. Goia)
        (THYROIDITIS
                acute, post-infectious, diag. & clinc. aspects)

STURZA, Marius; MACELARIU, A.; WEISS, L.; PREDA, Gh.; BURIA, A.; CATANA, I.;
MATES, M.

Balneotherapy and physical therapy of brachialgia and intercostal neuralgia
caused by spondylosis at the level of the cervico-dorsal spine. Probl.
reumat., Bucur. no.5:55-58 1958.

1. Instutul de balneologie si fizioterapie, Bucuresti.
      (SPONDYLOSIS, complications
            brachialgia & intercostal neuralgia in cervico-dorsal spondylosis,
            balneol. & phys. ther.)
      (ARM, dis.
            pain caused by cervico-dorsal spondylosis, balneol. & phys.
            ther.)
      (NEURALGIA
            intercostal, caused by cervico-dorsal spondylosis, balneol. &
            phys. ther.)
      (NERVES, THORACIC. dis.
            intercostal neuralgia, caused by cervico-dorsal spondylosis,
            balneol. & phys. ther.)
      (BALNEOLOGY, in various dis.
            brachialgia & intercostal neuralgia caused by cervico-dorsal
            spondylosis)
      (PHYSICAL THERAPY, in various dis.
            same)

WEISS, Lech, mgr. inz.

Radioisotopic methods of thickness measurement. Elektryka Poznan no. 2:149-163 '61.

1. Katedra Fizyki, Politechnika, Poznan

WEISS, Lech

Superaudio frequency generator with 200 W useful power. Elektryka
Poznan no.4:115-117 '63.

WEISS, M.

Slow or fast creation of a dynamic stereotype. p. 135.
ACTA PHYSICA POLONICA Warszawa Vol. 4, No. 4, 1956.

East European Accessions List (EEAL) Library of Congress
Vol. 5, No. 11, August 1956.

WEISS,Milan,sanitetski potpukovnik d-r; FORETIC,Vinko,sanitetski potpukovnik d-r

Venous pseudo-tumor of the neck and its differential diagnosis.
Voj.san.pregl.,Beogr. 17 no.3:257-260 Mr '60.

1.Oblasna vojna bolnica u Zagrebu. Odejeljenje za uho,grlo i nos.
        (JUGULAR VEIN dis.)
        (ANEURYSM diag.)

WEISS, M.; ZYGMUND, A. (Chicago)

On the existence of conjugate functions of higher order. Fund mat
48 no.2:175-187 '60.   (EEAI 10:1)

1. DePaul University and the University of Chicago
        (Fourier series)   (Functions)

WEISS, Marian

The Second Congress on Rehabilitation, Dresden, April 11-15,
1962. Nauka polska 10 no.6:151-154 N-D '62.

1. Klinika Rehabilitacji, Akademia Medyczna Warszawa; siedziba
kliniki: Konstancin pod Warszawa.

WEISS, Marian

Principles for the development of rehabilitation in Warsaw.
Chir. narzad.ruchu ortcp. pol. 28 no.5:499-502   '63.

1. Ze Stolecznego Centrum Rehabilitacji i Katedry Rehabilitacji
AM w Konstancinie. Kierownik: doc.dr. M.Weiss.

WEISS, Maria; ROHLICH, P.

Significance of the interstice of the peripheral nerve. Acta
morph. hung. 4 no.3:309-318 1954.

1. Department of Histology and Embryology of the Medical University,
Budapest (director prof. I.Toro)
      (NERVES PERIPHERAL, physiol.
            interstice, defensive mechanism)

WEISS, Maria; ROHLICH, Pal

The significance of interstice of the peripheral nerve.
Kiserletes orvostud. 6 no.6:506-513 Nov 54.

1. Budapesti Orvostudomanyi Egyetem Szovet-es Fejodestani
Intezete.
        (NERVES, PERIPHERAL, physiol.
            interstice, protective eff. in rats)

ROHLICH, P.,; WEISS, Maria.

Studies on the histology and permeability of the peripheral
nervous barrier. Acta morph. hung. 5 no.3-4:335-347 1955.

1. Department of Histology and Embryology of the Medical University,
Budapest (Director: Prof. I. Horo) Pal Rohlich, Budapest, IX.,
Tuzolto u. 58. Hungary,Maria Weiss, Budapest, V., Kalman u 24.
Hungary.
        (NERVES, physiology,
            histol. & permeability of peripheral nervous barrier)

WEISS, M.

ROHLICH, P.; WEISS, M.

Morphology of the diffusion barrier of peripheral nerves. Kiserletes orvostud. 9 no.2:135-143 Apr 57.

1. Budapesti Orvostudomanyi Egyetem Szovet es Fejlodestani Intezete.
(NERVES, PERIPHERAL, anat. & histol.
diffusion barrier, morphol. (Hun))

WEISS, M.A.

Significance of Weltman's reaction in diagnosis and prognosis of surgical diseases. Polski tygod. lek. 8 no.1:10-15 5 Jan 1953.

(CIML 24:3)

1. Of the Surgical Department (Head--T. Bolski, M. D.) of Jelenia Gora Municipal Hospital.

WEISS, Marian

Universal goniometer for tree-dimensional measurement of
articular movements. Polski tygod. lek. 11 no.14:614-617
2 Apr 56.

1. Z Kliniki Ortopedycznej W.A.M. i ze Szpitala Chirurgii
Kostnej w Konstancinie: kier: prof. dr. A. Gruca, Chylice,
ul. Panska 16.
        (MOVEMENTS,
                measurement with goniometer (Pol))

WEISS, Marian

Tripod canes enabling patients with flaccid paralysis of the
lower extremities to walk. Polski tygod. lek. 11 no.12:547-
548 19 Mar 56.

1. Z Kliniki Ortopedycznej W.A.M. i ze Szpitala Chirurgii
Kostnej w Konstancinie; kier. prof. dr. A. Gruca. Chylice, ul.
Panska 16.
(LEG, PARALYSIS,
flaccid, walking with tripod canes in (Pol))
(PARALYSIS,
flaccid of leg, walking with tripod canes in (Pol))

WEISS, MARIAN

WEISS, Marian; MILKOWSKA, Alicjz; KOZINSKA, Maria

Conservative treatment of scoliosis, in the light of electromyographic data. Chir. narz. ruchu 22 no.2:197-209 1957.

1. Z Kliniki Ortopedycznej A. M. w Warszawie i ze Szpitala Chirurgii Kostnej w Konstancinie Kierownik: prof. dr.A. Gruca Z Zakladu Leczniczego Usprawniania A. W. F. w Warszawie Kierownik: z-ca prof., kand. nauk M. Weiss Z Centralnej Poradni Miedzyszkolnej w Warszawie Kierownik: dr K. Sokal. Konstancin k/Warszawy, Szpital Chirurgii Kostnje.
        (SCOLIOSIS, ther.
                conservative, based on electromyographic data of
                musc. funct. (Pol))
        (ELECTROMYOGRAPHY, in var. dis.
                scoliosis, value of data on musc. funct. in con-
                servative ther. (Pol))

WEISS, Marian; SLOWIKOWA, Halina

Reconstructive surgery for irreparable paralysis due to spinal
fractures with cord lesions. Chir. narz. ruchu 22 no.4:441-447 1957.

1. Z Kliniki Ortopedy A. M. w Warszawię i ze Szpitala Chirurgii
Kostnej w Konstancinie. Kierownik: prof. dr A. Gruca. Konstancin
k/Warszawy, Szpital Chirurgii Kostnej. Wlodzimierz Ganszer.
        (SPINE, fractures
            causing spinal cord inj., surg. reconstruction (Pol))
        (SPINAL CORD, wds. & inj.
            caused by fract. of spine, surg. reconstruction (Pol))

2354.   Temporary spring spondylodesis in the treatment of scoliosis Resorujaca czasowa spondylodeza w leczeniu bocznych skrzywien kregoslupa WEISS M. and LUPUSKI M. Szpit. Chir. Kostnej w Konstancinie kolo Warszawy *Chir. Narzad. Ruchu* 1958, 23/4 (335—342) Tables 1 Illus. 7

This method consists in placing a two-arm elliptical spring rod in the area between the spinous and transverse processes. Detailed mechanical tests and investigations on the cadavers preceded the clinical application of this method and brought information how this spring bar worked. The operation has been performed in 6 subjects. Although the early results were promising, the author restricts its use to only a few cases because of technical difficulties and callus formation around the bar that may stop a growth of the spine within a fixed segment in growing subjects.

(IX, 19)

The treatment should be adjusted to the degree of deformity and the age of the pa-
tient. All instances of coxa vara, from first to third degree, may be successfully
operated upon. In mild cases one performs a Z-shaped subtrochanteric osteotomy
with adduction of the proximal fragment and abduction of the distal one: the frag-
ments are fixed with a wire loop. The restored angle between the femoral shaft
and neck should be greater than 130°, the exact value being dependent upon the age
of the patient. In cases of more severe deformity with evident pseudarthrosis in
the vicinity of the epiphyseal plate a similar osteotomy is performed, the femoral
head being supported by the distal fragment displaced medially. In this way the
joint becomes a ball-bearing, with the head constituting a central rotation point
(pivot). The results of treatment were controlled in 30 hips, out of 38 patients
operated upon. The follow-up period ranged from 1.5 to 16 yr. The radiographic,
clinical and functional results are considered. Results were evaluated according
to a 3-grade scale. Best results were attained in subjects treated by subtrochan-
teric osteotomy at an early stage of the disease. Osteotomy performed in rather
old cases gave 75% of excellent and good results. In the majority of cases the
changes in epiphyseal plate, femoral head, neck and great trochanter subside
following restoration of the correct angle between the femoral shaft and neck, and
the proximal femoral epiphysis develops normally. Sometimes the femoral head
and neck fuse with each other earlier than normal. (IX, 19)

WEISS, Marian

Radiological studies on coxa vara. Polski przegl. radiol. 23 no.3: 129-140
May-June 59.

1. Z Kliniki Ortopedycznoj A. M. w Warszawie Kierownik: prof. dr nauk med.
A. Gruca.
(COXA VARA, diag.
x-ray (Pol))

WEISS, Marian; DERUISKA, Irmina; SKIBINSKA, Anna

Therapeutic restoration of diseases of the motor organs in old age. Polski tygod.lek.15 no.6:211-215 8 F '60.

1. Ze Szpitala Chirurgii Kostnej w Konstancinie; dyrektor: doc. dr.med. Marian Weiss.
            (MOVEMENT DISORDERS in old age)

WEISS, Marian; DERULSKA, Irma; TABJAN, Wlodzimierz

Attempted application of cyclography in the analysis of movement
disorders. Polski tygod.lek. 15 no.45:1719-1722 7 N '60.

1. Ze Szpitala Chirurgii Kostnej w Konstancinie; dyrektor: doc.
dr med. M.Weiss.
        (MOVEMENT DISORDERS diag)

WEISS, Marian; WIRSKI, Janusz; SCHWELLER, Elzbieta

Electropathophysiology of stump muscles. Chir. narz. ruchu ortop. polska 26 no.6: '61.

1. Ze Szpitala Chirurgii Kostnej w Konstancinie i Laboratorium Doswiadczalnego Ministerstwa Zdrowia i Opieki Spolecznej Dyrektor: doc. dr. M. Weiss.
    (AMPUTATION STUMP physiol)   (ELECTROMYOGRAPHY)

WEISS, Marian; WIRSKI, Janusz

Studies on muscle tension in transplantation. Chir. narz. ruchu
ortop. polska 27 no.1:109-116 '62.

1. Ze Szpitala Chirurgii Kostnej w Konstancinie Dyrektor: doc.
dr M.Weiss.
(MUSCLES physiol)   (TENDONS transpl)

GRUCA, Adam; WEISS, Marian; BURBOWA, Elzbieta

The physiological, psychological and social foundations and
the problems of rehabilitation. Nauka Polska 10 no.1:55-62
Ja-F '62.

1. Czlonek korespondert Polskiej Akademii Nauk, Warszawa (for
Gruca).

WEISS, Marian, doc. dr.

Early surgical interventions in the treatment of progressive polyarthritis. Chir. narzad. ruchu ortop. Pol. 28 no.7:683-691 '63

1. Z Katedry i Kliniki Rehabili cyjnej Akademi Medycznej w Warszawie, Konstancin (Kierownik: doc. dr. M. Weiss).

WEISS, M.; BIELICKI, B.; GIELZYNSKI,A.

Reconstructive interventions in rheumatoid deformities. Chir.
narzad. ruchu ortop. Pol. 28 no.7:693-704 '63

1. Z Katedry i Kliniki Rehabilitacji Akademii Medycznej w
Warszawie, Konstancin (Kierownik: doc. dr. Marian Weiss).

WEISS, Marian, doc. dr.; HALSKI, Henryk

Resul s of treatment for scoliosis in adolescents by Cotrel-
Gruca's technique. Chir. narzad. ruchu ortop. Pol. 28 no.7:
889-895 '63

1. Z Kliniki Rehabilitacji Akademii Medycznej w Warszawie,
Konstancin (Kierownik: doc. dr. M. Weiss).

WEISS, Milan, dr.; FORETIC, Vinko, dr.; WEISGLASS, Henrik, dr.

Scleroma in the Samobor Region. Lijecn. vjesn. 83 no.11:1165-1170 '61.

1. Iz Otorinolaringoloskog odjeljenja Vojne bolnice i Bakterioloskog odjela Republickog zavodu za zastitu zdravlja u Zagrebu.

(RHINOSCLEROMA epidemiol)

WEISS, Milan, sanitetski pukovnik, dr.

Role of otorhinolaryngologists in modern warfare. Vojnosanit. pregl.
18 no.9:785-788 S '61.

(OTORHINOLARYNGOLOGY)   (WAR)

L 10905-65   EWA(d)/EWE(t)/EWP(h)—JD
ACCESSION NR: AP4049714   Z/0031/64/012/008/0561/0565

AUTHOR: Takacs, Z. (Engineer); Weiss, P.   B

TITLE: Improved production of large-size components made of sheet

SOURCE: Strojirenska vyroba, v. 12, no. 8, 1964, 561-565

TOPIC TAGS: marine engineering, sheet

Abstract: Described is a new method, developed in the Slovak
Shipyards, used in the production of plates for building ships.
The new method eliminates the layout of rectangular components,
reduces physical labor and improves safety at a higher pro-
ductivity, eliminates idle time, improves accuracy of dimensions,
and introduces the use of pallets. Original article has 8 figures.

Card   1/2

L 10905-65
ACCESSION NR: AP4040714

ASSOCIATION: Slovenske lodenice, n. p. zavod Gabora Steinera, Komarno
(Slovak Shipyards, Gabor Steiner Plant)

SUBMITTED: 00   ENCL: 00   SUB CODE: IE, MS

NO REF SOV: 000   OTHER: 000   JPRS

Card 2/2

TAKACS, Zoltan, inz.; WEISS, Pavel

> Improved technology of the production of large plate elements.
> Stroj vyr 12 no.8:561-565 '64.
>
> 1. Slovenske lodenice National Enterprise, zavod Gabora Steinera,
> Komarno.

WEISS, Pawel, mgr inz.

Present state of heating Doerschel furnaces built in Poland.
Rudy i metale 8 no. 11:453-456 N '63.

SEWERYNSKI, Boguslaw, dr. inz.; WLAZINSKA, Teodozja, mgr. inz.; WOJTAS, Jan, inz.; WEISS, Pawel, mgr. inz.; KORYCINSKI, Zbigniew, mgr. inz.

Tests in drying coal flotation concentrates by infrared radiation. Przegl gorn 20 no.11:563-566 N '64.

WEISS, Przemyslaw, mgr inz.

The servicing of airports by surface communication. Przegl techn
no.36:6 9 S '62.

WEISS, S.

Thickness of fillet welds in overhead traveling cranes.

P. 218 (PRZEGLAD SPAWALNICTWA) (Warsaw, Poland) Vol. 9, no.9, Sept. 1957

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5. 1958.

ROMANIA

ATHANASESCU I.; COREANU, G.; WEISS, St.; COTOIU, P.

Surgical Clinic I (Clinica I-a Chirurgicala); Director:
    Professor Dr I. Danicico - (for all)

Timisoara, Timisoara Medicala, No 1, Jan-Jun 63, pp 47-56

"Observations on Primary Gastric Resections with Gastroduodenal
    Reconstruction in a Single Layer." (Report presented to the
    Society of Medical Sciences, Surgery Section, on 30 January 1963.)

4

WEISS, St., dr.; STREIAN, C., dr. COBILANSCHI, E., asistenta medicala

Considerations on hemodynamic changes in the aged in normal and pathological conditions. Med. intern. (Bucur.) 17 no.1:75-80 Ja '65

1. Lucrare efectuata in Clinica I medicala, Institutul de medicina, Timisoara (director: conf. S. Gavrilescu).

STANCIU, L., dr.; NICOLAEVICI, G., dr.; RADIVOEVICI, Al.; WEISS, St. dr.

Some indications furnished by production disorders for the diagnosis and prognosis of coronary disease. Med. intern. (Bucur.) 16 no. 11: 1333-1342 N '64

1. Lucrare efectuata in Clinica I medicala, I.M., Timiscara.

GAVRILESCU,S., dr.; FALCOIANU,A., dr.; STOSSEL,S,dr.; WEISS, S. dr.; STREIAN, C., dr.; BRANEA, I., dr.

The carotid sinus hyperreflexivity syndrome. (a clinical and funotional study). Med. intern. (Bucur) 17 no.5:561-570 My '65.

1. Lucrare efectuata in Clinica I medicala (conf. S. Gavrilescu) si Laboratul de electroencefalograma al Clinicii de neurologie (prof. A. Sofletea, Timisoara).

WEISS, Tadeusz, inz.

Failure of air blast circuit breakers for 110 kv. in the power plants
of the southern Polish area. Energetyka Pol 14 no.3:94-96 Mr '60.

(EEAI 9:8)

1. Zaklady Energetyczne Okregu Poludniowego
       (Electric circuit breakers)
       (Poland--Electric-power plants)

WEISS, T.
SURNAME (in caps); Given Names

Country: Rumania

Academic Degrees: Engineer

Affiliation: -not given-

Source: Bucharest, Stiinta si Tehnica, No 4, 1961, pp 44.

Data: "The Electrical Installation of the Manet- S 100 Scooter."

CZECHOSLOVAKIA

Jozef SLADEK, Aristid MOSANSKY and Tibor WEISZ, Chair of Zoology and
Forest Preservation of the Forestry and Lumber Industry College (Katedra
zoologie a ochrany lesov Vysokej skoly lesnickej a drevarskej,) Zvolen;
Department of Zoology of the Museum of Eastern Slovakia (Zoologicke
oddelenie Vychodoslovenskeho muzea), Kosice; and Sarisske Muzeum, Bardejov.

"The Lynx - Lynx lynx (Linne 1758) in Slovakia."

Abstract [German summary modified]: After the war, the European bobcat
became much more frequent in the Carpathian mountains but since it is a
trophy game, data about its strains is difficult to obtain. From study of
40 skulls collected and some skins examined since 1950, authors conclude
that Slovakia harbors mostly the larger Northern variety (L. l. lynx) and
the Caucasian one (L. l. orientalis) but not the smaller Southern European
one (L. l. pardina); possibly another isolated indigenous subspecies is
also present. Table, 2 photographs; 7 Western and 3 Soviet references.

1/1

WEISS, T.

Hippocampal theta rhythm at various body temperatures. Activ.
nerv. sup. 6 no.1:44-45   '64

ROLDAN,E.; WEISS,T.; BOHDANECKY,Z.

Experimental influencing of the duration of sleep cycles with
rats. Activ. nerv. sup. 6 no.1:42-43   '64

*

BOHDANECKY, Z. ; WEISS, T.

The electrophysiological manifestations of narcotic state
evoked by magnesium sulphate. Activ. nerv. sup. 6 no.1:42
'64.

*

WEISS, T.;KOZESNIK, B.

"Effect of Cooling on the Course of Tetanic Intoxication." p. 69,
(CESKOSLOVENSKA FYSIOLOGIE, Vol. 3, No. 1, Jan. 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4
No. 5, May 1955, Uncl.

WEISS, T.; KOZESNIK, B.

Convulsion threshold during tetanus toxin poisoning as the index of
the functional state of the central nervous system. Chekh. fiziol.
3 no.4:432-436 1954.

1. Fiziologicheskiy institut Chekhoslovatskoy Akademii nauk, Praga.
        (CENTRAL NERVOUS SYSTEM, function tests,
           convulsion threshold to tetanus toxin as index of CNS
           funct.)
        (TETANUS,
           toxin, convulsion threshold in toxin pois. as index of
           CNS funct.)
        (CONVULSIONS,
           threshold to tetanus toxin as index of CNS funct.)

WEISS, Tomas

Pathogenesis of tetanus. Cas. lek. cesk. 95 no.21:566-569
25 May 56.

1. Z Fysiologickeho ustavu CSAV, red. doc. Servit.
(TETANUS, etiol. & pathogen.
(Cz))

WEISS, T.; BURES, J.

Non-specific projection from the subcortical region to the cerebral
cortex in spreading EEG depression. Cesk. fysiol. 7 no.3:186-187 May
58.

1. Fysiologicky ustav CSAV, Praha.
        (CEREBRAL CORTEX, physiol.
                spreading depression, non-specific projection from subcortex
                to cortex (Cz))

BURES, J.; BURESOVA, O.; WEISS, T.

Changes of subcortical electrical activity during spreading cortical
EEG depression. Cesk. fysiol. 8 no.3:175-176 Apr' 59.

1. Fysiologicky ustav CSAV, Praha. Predneseno na III. fysiologickych dnech
v Brne dne 13. 1. 1959.
            (CEREBRAL CORTEX, physiol.
                    spreading EEG depression, subcortical electrical changes (Rus))

WEISS, T.

Use of spreading EEG depression for the analysis of mutual rela-
tionships between the neocortex and hippocampus. Cesk. fysiol. 8
no.5:442-443 S '59

1. Fysiologicky ustav CSAV, Praha.
          (HIPPOCAMPUS physiol.)
          (CEREBRAL CORTEX)

WEISS, T.

Comparison of physiology, pharmacology and biochemistry in Czechoslovakia and in certain capitalistic countries. Cas. lek. cesk. 98 no.25:Lek. veda zahr., 133-134 19 June 59.

1. Fyziologicky ustav CSAV.
            (PHYSIOLOGY,
                    in Czech., comparison with other countries (Cz))
            (PHARMACOLOGY,
                    same)
            (BIOCHEMISTRY,
                    same)

WEISS, T.

Effect of spreading EEG depression induced in the neocortex on bio-electrical activity of the thalamus. Cesk. fysiol. 9 no.1: 65-66 Ja 60.

1. Fysiologicky ustav CSAV, Praha.
        (CEREBRAL CORTEX physiol.)
        (THALAMUS)

WEISS, T.

Contribution to the importance of spreading cortical depression
on the activity of the reticular formation. Cesk.fysiol. 9 no.3:
276-277 My '60.

1. Fysiologicky ustav CSAV, Praha.
        (CEREBRAL CORTEX physiol)
        (BRAIN STEM physiol)

WEISS, T.

Physiology of the limbic structures. (Hippocampus and physiologically related areas). Cas. lek. cesk. 99 no.16: Lek.veda zahr.:89-96 15 Ap '60.

1. Fyziologicky ustav Ceskoslovenske akademie ved, Praha.
          (HIPPOCAMPUS physiol.)

WEISS, T.

Cortico-thalamo-cortical relationships. Activ. nerv. sup. 3 no.2:
176-184 '61.

1. Fyziologicky ustav CSAV, Praha.

(CEREBRAL CORTEX physiol)   (THALAMUS physiol)

WEISS, T.

Functional flexibility of specific afferent pathways. Cesk.fysiol.
10 no.1:34-47 Ja '61.

1. Fysiologicky ustav CSAV, Praha.
        (NERVOUS SYSTEM physiol)

WEISS, T.

Cortico-reticular relationships (effect of the cortex on the reticular formation). Cesk.fysiol.10 no.2:155-163 Mr '61.

1. Fysiologicky ustav CSAV, Praha.
   (CEREBRAL CORTEX physiol)
   (RETICULAR FORMATION physiol)

WEISS, T.

Prague, Vol 8, čísl, No 4, April 1962
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1. "Isotopes in Biological Sciences." Arnost DVORACEK, Docent, MD, RNDr Doctor of Natural Sciences, Dr Sc Doctor of Sciences] director of the laboratory for the study of the transformation of matter in cells and ... Biological Institute, ČSAV (Československá Akademie Ved, Czechoslovak Academy of Sciences) (Biological Institute ČSAV); pp 200-204.

2. "Will Villages Disappear and TownsGrow?" Frxxn SKUDA, Professor, Engr, Architect, director of the Research Institute for Building and Architecture (Vyzkumny ustav ... a architektury); Brno; pp 205-211.

3. "Man and Time." Alois PERINA, Professor, external collaborator of the Astronomical Institute (Astronomicky ustav); Faculty of Natural Sciences (Prirodovedecka fakulta), J.E. Purkyne University (Universita J.E. Purkyne); Brno; pp 212-215.

4. "Neurophysiology on the Eve of Big Discoveries." Tomas WEISS, Graduate Physician (Promovany lekar), C Sc, scientific worker of the Physiological Institute, ČSAV (Fysiologicky ustav ČSAV); Prague; pp 216-219.

5. "Past and Present in Oudenne." Olga SKALNIKOVA, Ph.D., ... scientific worker ... Institute for Ethnography and Folklore, ČSAV (Ustav pro etnografii a folkloristiku ČSAV); Prague; pp 220-228.

RUDIGER, W.; WEISS, T.

The threshold of the synchronisation of "arousal" reactions under the
influence of electrical stimulation of the reticular formation and
hypothalamus during the course of spreading cortical depression. Activ.
nerv. sup. 4 no.2:142-143 '62.

1. Fyziologicky ustav CSAV v Praze.

(CEREBRAL CORTEX physiol)   (BRAIN STEM physiol)
(HYPOTHALAMUS physiol)

CZECHOSLOVAKIA

T. WEISS, Institute of Physiology (Fysiologicky ustav), CSAV, Prague.

"New Data About the Physiology of Dreams."

Prague, Ceskoslovenska Fysiologie, Vol 12, No 1, Jan 1963; pp 46-51.

Abstract: Review of work published during the last ten years on the
electroencephalographic and micromuscular correlates of dreaming in
man and on similar patterns observed in animals; stereotactic and
pharmacologic studies. Of 49 references, 4 are Czech, 1 Hungarian, rest
Western, mostly English-language. Three additional references to
author's own work, one in a Czech, Mexican, US journal have apparently
been added in proof.

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WEISS, T.; FIFKOVA, E.

The effect of neocortical and caudatal spreading depression
on "circling movements" induced from the caudate nucleus.
Physiol. Bohemoslov. 12 no.4:332-338 '63.

1. Institute of Physiology, Czechoslovak Academy of Sciences,
Prague.
(CAUDATE NUCLEUS)   (CEREBRAL CORTEX)
(BRAIN ELECTROPHYSIOLOGY)   (BEHAVIOR)
(LOCOMOTION)

WEISS, T.; FIFKOVA, E.

Sleep cycles in mice. Physiol. Bohemoslov. 13 no.3:242-245 '64

1. Institute of Physiology, Czechoslovak Academy of Sciences, Prague.

WEISS, T.

Effect of body temperature changes on theta rhythm in the rat hippocampus. Physiol. Bohemoslov. 13 no.3:246-255 '64

1. Institute of Physiology, Czechoslovak Academy of Sciences, Prague.

CZECHOSLOVAKIA

KREKULE, I.; WEISS, T.R.; Laboratory of Neurocybernetics, Institute of Physiology, Czechoslovak Academy of Sciences, Prague. /Orig. version not given_7.

"Crosscorrelation and Cross-Spectral Analysis of EEG with Respect to Changes of Vigilance."

Prague, Activitas Nervosa Superior, Vol 8, No 2, Jun 66, pp 193-194

Abstract: Application of crosscorrelation functions and corresponding cross-spectral power density functions for detection of the common part of dependency between two simultaneous EEG recordings are discussed. EEG from electrodes symmetrically placed on the frontal cortices of rats were analyzed. In recordings of synchronized high voltage type (characterizing behavioral sleep) the crosscorrelation and the cross-spectral density are higher between these recordings than in desynchronized (aroused) activity. 1 Figure, no references. Submitted at the 4th Intradisciplinary Conf. of Exper. and Clin. Study of Higher Nerv. Functions at Mar. Lazne, 12-15 Oct 65. Article is in English.

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CZECHOSLOVAKIA / USA
WEISS, T.R.; KADO, R.T.; ADEY, W.R.; Laboratory of Neurocybernetics Institute of Physiology, Czechoslovak Academy of Sciences, Prague; /Orig. version not given_7; Brain Research Institute UCLA, Los Angeles.

"Impedance and DC Potential Shifts During Cortical Spreading Depression."

Prague, Activitas Nervosa Superior, Vol 8, No 2, Jun 66, pp 194-195

Abstract: Experiments were conducted on 17 rats either anesthetized or immobilized (by Gallamine) and artificially respirated during spreading depression (SD). An increase of the impedance occurs during the SD; it is caused by the increase of the equivalent resistance and capacitive reactance. The impedance shift starts later and lasts longer than the negative DC potential accompanying the SD wave. Depolarization and repolarization of the gross cortical DC potential is caused by depolarization and repolarization of the membranes of the neurons due to changes in permeability; this is accompanied by an increase of the impedance of the brain tissue. 1 Figure, no references. Submitted at the 4th Intradisciplinary Conf. of Exper. and Clin. Study of Higher Nerv. Functions at Mar. Lazne, 12-15 Oct 65. Article is in English.
1/1

SKUPIN, Lumir; WEISS, Vladimir

Designing engineering structures from laminated plastics. Vestnik CSAV
71 no.4:419-421 '62.

WEISS, Vladimir, inz., C.Sc.

Buckling strength of concrete and reinforced concrete columns. Stav
cas 11 no.3:185-206 '63.

1. Ustav teoreticke a aplikovane mechaniky, Ceskoslovenska akademie
ved, Praha.

WEISS, Vladimir, inz. C.Sc.; TANNENBAUM, Marcel, inz.; TICHY, M., inz., C.Sc.;
    VORLICEK, M., inz., C.Sc.

    Effect of prestressed reinforcement in the pressed sectional area
    on the load-capacity variability; discussion. Stav cas 11 no.3:
    240-244 '63.

    1. Ustav teoreticke a aplikovane mechaniky, Ceskoslovenska akademie
    ved, Praha (for Weiss).; 2. Ustav stavebniho vyzkumu a stavebni
    ekonomiky, Bukurest (for Tannenbaum).

WEISS, Vladimir, inz. CSc.

Cooperation of brittle materials with laminates. Stav cas 13
no.3:170-188 '65.

1. Institute of Building of the Czech Higher School of
Technology, Prague. Submitted January 27, 1964.

WEISS, Vladimir, inz., CSc.

Buckling carrying capacity of prestressed concrete bars. Inz
stavby 11 no.7:267-273 Jl '63.

RYDLEWICZ, Janusz, mgr inz.; WEISS, Wojciech, mgr inz.

Activities of the Poznan Branch of the Association of the Polish
Electrical Engineers. Przegl techn 84 no.46:5 17 N '63.

WEISS, Z.

Anesthesia in terminal states. Rozhl. chir. 41 no.11:721-723 N '62.

1. Chirurgicke oddeleni OUNZ Nymburk, prednosta MUDr. A. Rufer.
   (ANESTHESIA)   (EMERGENCIES)   (HOSPITALS)

WEISS, Z.

Stomach surgery under local anesthesia with neuroplegic
premedication. Rozhl. chir.; 42 no.8:570-575 Ag '63.

1. Chirurgicke oddeleni OUNZ v Nymburce, vedouci MUDr. A. Rufer.
   (STOMACH)   (PROCAINE)   (ANESTHESIA ADJUVANTS)
   (STOMACH NEOPLASMS)   (PEPTIC ULCER)
   (SCOPOLAMINE)   (EPHEDRINE)   (PHENOTHIAZINES)
    (CHLORPROMAZINE)   (MEPERIDINE)

ADAMSKI, L.; ARKUSZEWSKI, J.; BEDNARZ, R.; BRYHN-INGEBRIGTSEN, K.; JOCKOVIC, M.
JOZEFOWICZ, E.T.; JOZEFOWICZ, K.; KACZMAREK, W.; KULIKOWSKA, T.;
MALEWSKI, S.; MIKA, J.; POP-JORDANOV, J.; SMIT, J.; STAMM'LER, R.J.J.;
SZECHTER, A.; TAKAC, S.; WEISS, Z.

Microscopic neutron flux distributions in unit cells of critical
assemblies of the NPY-project. Nukleonika 9 no.7/8:575-585 '64

1. Institute of Atomic Energy, Kjeller, Norway (for Bryhn-Ingebrigtsen,
Smit, Stamm'ler). 2. Institute of Nuclear Research, Warszawa-Swierk
(for Adamski, Arkuszewski, Bednarz, E.T. Jozefowicz, Kaczmarek, K.
Jozefowicz, Kulikowska, Malewski, Mika, Szechter). 3. Institute of
Nuclear Sciences, "Boris Kidrich," Vicha, Yugoslavia (for Jockovic,
Pop-Jordanov, Takac). 4. On leave from Institute of Nuclear Research,
Warszawa-Swierk (for Weiss).

WEISS, Z.

Determination of the optimal charge of balls and air stream for drum-ball crushers.
(ENERGETYKA. Vol. 10, no. 6, Nov./Dec. 1956.)

SO: Monthly List of East European Accessions(EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

27313
P/046/60/005/011/002/018
D249/D303

21.5210

AUTHORS: Rzeszot, Tadeusz, and Weiss, Zbigniew

TITLE: Neutron spectrum temperature measurements by means of
             boron-glass filters

PERIODICAL: Nukleonika, v. 5, no. 11, 1960, 689 - 703

TEXT: In this paper, measurements on the temperature of neutrons
emerging from a horizontal channel of the WWR-S reactor of the In-
stitute of Nuclear Research, Warsaw, are described and interpreted.
The basic measurements are of neutron flux (i) without any filter,
(ii) filtered through cadmium, (iii) filtered through boron-glass
of known effective thickness, and (iv) filtered through boron-glass
and cadmium. By taking a ratio (iii) - (iv)/(1) - (ii), a function
a(h) is determined, where h is the boron filter thickness which is
dependent of background. Assuming the sensitivity of the neutron
detector to be inversely proportional to the neutron velocity, the
function a(h) may be written

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Neutron spectrum temperature 📍.

$$a(h) = \frac{\int_0^\infty N(E)\chi(E) \exp\left[-(\Sigma_a(E) + \Sigma_s)h\right]dE}{\int_0^\infty N(E)\chi(E)\,dE}, \qquad (5)$$

where

$$\chi(E) = 1 - \exp\left[-\Sigma_{cd}(E)\cdot g\right]. \qquad (6)$$

Here the exponential term in Eq. (5) represents the transmission function of the boron-glass, and that in Eq. (6) the same for the cadmium, thickness g. $N(E)$ is the neutron spectrum, Σ_s; the boron-glass scattering cross-section is assumed to be energy-independent, and $\Sigma_a(E)$, its effective absorption cross-section is equal to $\Sigma_a^0 E_0^{1/2} E^{-1/2}$ where Σ_a^0 is the absorption cross-section at $E_0 = 0.0253$ eV. Rewriting Eq. (5)

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$$a'(h) = k \int_0^\infty N'(E) \, K(E, \, h) \, dE, \tag{7}$$

where $a'(h) = a(h) \exp [\Sigma_s \cdot h]$, $k^{-1} = \int_0^\infty N'(E) \, dE$ (7')

$$K(E, \, h) = \exp [-\Sigma_a^o \, E_o^{1/2} \, E^{-1/2}] \tag{7"}$$

a Fredholm integral equation of the first type is obtained which
must have a unique solution. Assuming a trial function of the form

$$N_1(E) = 2\pi^{-1/2} [\mu(E_c/E_T)]^{-1} N_T E^{1/2} \exp [-E/E_T] E_T^{-3/2} dE \qquad (8)$$
$$\text{for } E < E_c$$
$$N_2(E) = 2^{-1} E_c^{1/2} E_F E^{-3/2} d\Sigma \qquad \text{for } E > E_c$$

where

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Neutron spectrum temperature ...

relation between z and s is obtained, a value of s is assumed, and the correction term for the filters

$$Q(h, z(s), s) = |\exp(-x\,Bs^{-1}) - \exp(-xz(s)^{-1/2})|\,x^{-1}$$ (15)

where $x := \Sigma_a^0\,sh$

appearing in Eq. (12) is calculated. A value of x(h) is then found from Eq. (12) and hence s(h) is determined. Since the actual neutron spectrum is quasi-Maxwellian, s(h) depen██ weakly on h██ is averaged by

$$s = h_N^{-1} \cdot \sum_{i=1}^{i=N} s_i(h_i - h_{i-1}); \quad h_0 = 0$$ (19)

the resulting value being used in a further iteration. 2 or 3 iterations are found to be sufficient and then

$$E_T = E_0 \cdot s_0^{-2}.$$ (18)

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Then, substituting from Eq. (8)

$$a_{in}(x) = |c_1(z) 2\pi^{-1/2} \int_0^z t^{1/2} \exp | - (t + xt^{-1/2})| dt + C_2(z) \cdot |\exp(-xs^{-1}B) -$$

$$- \exp(-xz^{-1/2})| x^{-1}| |N_T(z) + C_2(z)(z^{-1/2} - s^{-1} \cdot B)|^{-1} \quad |12| \qquad (12)$$

where

$$C_1(z) = N_T(z) |\mu(z)|^{-1} \quad C_2(z) = \sqrt{z} N_E(z); \quad B = \sqrt{\frac{E_0}{0.381}}$$

and there are two unknown temperature-dependent parameters s and z. These may be found by either a least squares process or by a cadmium ratio measurement, when

$$1 - p = |n(0) - n_{cd}(0)| |n(0)|^{-1} = N_T(z) + C_2(z) |z^{-1/2} - s^{-1} B| \qquad (13)$$

where p is the inverse cadmium ratio. Thus, there are two methods of treating the experimental results. Method 1: From Eq. (13) a

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Neutron spectrum temperature ...

$$\mu(z) = 4\pi^{-1/2} \int_0^{\sqrt{z}} t^2 \exp(-t^2)\, dt = \operatorname{erf}\sqrt{z} - 2\pi^{-1/2} z^{1/2} \exp(-z) \tag{9}$$

the numbers of thermal and epithermal neutrons N_T and N_E are

$$\overline{N_T(z)} = \mu(z)\,[\mu(z) + 4\pi^{-1/2} z^{1/2} \exp(-v)]^{-1}; \quad N_E(z) = 1 - N_T(z) \tag{10}$$

where $z = E_T/E_c$, since $N_T + N_E = 1$, and $N_1(E_c) = N_2(E_c)$. By appro-
ximating the function (E) the effective cadmium cut-off energy E_c
was found to be 0.331 eV. The kernel of Eq. (7) may be transformed
into a dimensionless form

$$K(E, h) = \exp(-x \cdot t^{-1/2}) \tag{11}$$

where

$$x = \Sigma_a^{30} s \cdot h; \quad t = E \cdot E_T^{-1}; \quad S = E_0^{1/2} E_T^{-1/2}$$

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Method 2: The theoretical transmission function of the s and z variables is computed for different filter thicknesses, and the solution is given by the values of s and z for which

$$\delta^2 = \sum_{i=1}^{N} [a(h_i) - a_{th}(h_i)]^2 \qquad (20)$$

is a minimum. In the experiments, the boron-glass contained 11 % by weight of B_2O_3 and the effective thicknesses of the filters were determined with the aid of a neutron crystal spectrometer. The neutron beam was collimated by a paraffin-boron channel, and the filters could be inserted between the pieces forming the collimator. A BF_3 proportional counter, shown to have 1/v efficiency, was used to detect the neutrons, and the cadmium filter was 0.6 mm thick. Measurements were made over a period of a year in various channels and with various reactor core loadings, and results bet-

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ween 346° and 383°K were found. The computation error of the absolu-
te temperature was found to be ± 28°K, due principally to the ina-
ccuracy of the cadmium ratio measurements, but since the sensitivi-
ty of the method is ± 4°K this cannot explain the dispersion of the
results. Calculations made by Method 2 do not involve the cadmium
ratio, and the estimated error is only ± 14°K. The authors feel
that the result 350±14°K, given by a set of measurements for which
the results of both methods of calculation are very close, can be
relied upon, and this is in good agreement with measurements made
with a crystal spectrometer and by a time of flight method. The
authors thank D. O'Connor, D.Sc., and J. Sosnowski, M.Sc. for in-
formation on filter constants and help in the crystal spectrometer
measurements, J. Topa, M.Sc. and W. Kaczmarek, M.Sc., for help in
the measurements, Mrs. E. Weiss for the calculations, and K. Kowal-
ska, M.Sc. for valuable comments on the paper. There are 3 tables,
and 13 figures.
ASSOCIATION: Institute of Nuclear Research, Warsaw. Reactor Engi-
             neering Department
SUBMITTED: July 1960

Card 8/8

WEISS, Zbigniew

The distribution of neutron spectrum temperatures in an infinite plate of heavy plate of heavy gas moderator. Nukleonika 5 no.12: 795-810 '60.

1. Institute of Nuclear Research, Warszawa, Reactor Engineering Department

23892
P/046/61/006/001/001/005
D226/D301

21.1200

AUTHOR: Suwalski, W., Weiss, Z.

TITLE: A method of determining optimal operating parameters
             of a reactor oscillator

PERIODICAL: Nukleonika, v. 6, no. 1, 1961, 1-16

TEXT: This article is the presentation of a simple and adequately
accurate method of measuring the reactor oscillator parameters
prior to the final design of this complicated installation. The
building of the Polish graphite moderator reactor "EWA" has been
decided (type WWRS) and the authors consider it necessary to have
preliminary measurements made. The proposed method is a static
method of determining the expected sensitivity of the oscillator.
It is based on the definition of changes in the multiplication fac-
tor of the reactor and on the characteristics of local changes in
neutron density for the assumed trajectory of the sample movement.
Similar characteristics, as applied to the evaluation of resonance
integrals have already been used by Klimentov (Ref. 8) /¯Abstracter's

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A method of determining...

note: This reference number is quoted in the text, but not listed in the references, of which only seven are given_7. The characteristic of change of the multiplication factor is defined as the dependence of the change of the multiplication factor k_{eff} (with respect to a given level) on the coordinate of the sample on the sample path z. It permits any given equation of motion $z = z(t)$ of the sample to determine the time dependence of $k_{eff}(t) = k_{eff} [z(t)]$. Using it the time changes in the neutrons local density $n(t) = n [z(t)]$ can be also determined. In practice the path of the sample is determined by the measurement channel of the reactor. After determining $[k_{eff}(t)]_x$ from $[k_{eff}(z)]_x$ and from the assumed z(t) the author ascertains the amplitudes of harmonics of the overall enrichment signal G as well as the sensitivity of the global signal method for a given value of $x = x_1$. Simultaneously with the above measurements, measurement can be made of the neutron density in the vicinity of the channel in which the sample is moving. For one idealized reactor the sensitivity of the global signal method would be constant for the whole channel. In the study of nuclear

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purity of moderators, and especially that of graphite, the phenom-
enon of neutron absorption is masked to a great extent by the action
of moderator itself, even assuming that there is diffraction and the
sensitivity of the global signal method would be negligible. The
sensitivity of the local signal method 1 is being determined by the
static method from $1 = \frac{1}{x} \frac{L - I_0}{L_0}$ (12)   where L - amplitude of

local signal with impurities; I_0 - same for sample without impurit-
ies; x - relative impurity content of the characteristics of local
changes of the neutron density. These changes are due also to the
combined effect of three basic effects: Absorption of neutrons in
the sample which decreases the neutron density, the diffraction of
the thermal neutron stream and the moderation of epithermal neutrons
which increase the local density of thermal neutrons. From the three
above factors that of moderation has the preponderant role in reac-
tors, in which the neutron spectrum has a large epithermal constituent.
Since in the active lattice the local signal cannot be used it must
be based on measurements performed outside the active lattice. This
measurement has the advantage that at a distance from the reactor
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core the ratio of thermal to epithermal stream is large so that the measurement is in effect that of thermal absorption with a small influence only of resonance absorption. The diffraction can also be nearly eliminated and finally, the practically independent of power level-oscillator operation does not hinder other experiments. The third method of the resultant signal R, in which an ionization chamber located at any point measures in principle only this resultant signal, can also be used for determining absorption in such moderators as graphite or heavy water. The sensitivity of this method depends on angle ϕ and given by

$$\vartheta = \frac{d\Theta}{dx}\bigg|_{x \to 0} = (g+1) \frac{\sin \varphi}{\dfrac{1 + a^2}{a} - 2\cos \varphi} \qquad (14)$$

is proportional to the sensitivity of both previously discussed methods. This sensitivity depends on parameters a and φ, a being the ratio of amplitudes of local and global signals for pure materials respectively and φ - the phase delay angle of the global signal due to the change in the multiplication factor. Graphs of (g + 1)

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